formerly they practiced empollamiento
/5 cont./ /"breeding, hatching"/
(couvade); they have a purely exorcistic, animistic system, and not a sacerdotal or theistic one; they make metal objects; they travel in canoes..., they grow and spin cotton and make complicated weavings with this fiber...; they press yucca with a basketwork press of characteristic design; they make numerous objects of a typical and fine basketwork."

Chapter II

The Land Where the Pemón Indians Live

10. The general area. 11. The main nucleus of the Gran Sabana. 12. Its location. 13. Climate. 14. Area. 15. Orography. 16. Hydrography. 17. The name Gran Sabana. 18. The name Alto /Upper/ Caroní. 19. The name Serranía de Guayana /Guiana Ridge/. 20. The wealth of this region. 21. The beauties of the same. 22. Caroní and Roroima. 23. Means of communication.

10. The tribes of the Pemón language live in the most central part of Guiana in the region of Venezuela, which, /6/ orographically we may call Roroima Mountain (N., S., and W. of same) and hydrographically, Caroní River.

I believe it necessary to repeat that the borders of Indians, like those of birds, are not those designated by international treaties; and thus the Pemón Indians go beyond the borders of Venezuela and also extend into the Brazilian campos of the Branco River and into the forests of British Guiana.

11. There are a group of Pemón who live in Kamarata and Urimán (savannas); a few less live in the forests of the Tiriká, the Caroní, and the Paragua; but the main nucleus of this tribe is located on the Gran Sabana, hence we must

2:Armellada--107a M-5 (1933-1945) 1946 SS16 Pemon SS16

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The native women of the Gran Sabana involved in their weaving.

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Fibers and weaving of the native women of the Gran Sabana.

Hunting

/82 cont./

and fishing equipment: bow and arrows, blowgun and quiver, traps and nets, harpoon and hook. Poisons for the same: curare and several kinds of Verbascum. Culinary equipment: grater, manioc strainer, a fine sieve, baking pan, small mats, ollas, large wide-mouthed jars for catching rain, and mixing bowls. Ranchos or temporary dwellings and houses of fixed location: the former rectangular and the latter circular with conical roofs. Items of clothing and adornment: loincloths, feminine guayucos, moriche /palm/ sandals, wrist and ankle rings, garters, foliage coverings /pampanillas/, halos, necklaces and earrings; hammocks, bags, and straps for carrying children. Their household items: small benches, pothooks, camazas /large gourd dishes/, awls, guayares, and an infinity of baskets. Their instruments of navigation: paddle and pole, balsas and canoes made from tree trunks or with their bark /concha/ only. Their textiles: with the spindle, fibers twisted upon the thigh, other braided fibers and small weavings done on rudimentary looms. Their musical instruments: timbrels, whistles /pipes/, flutes, war trumpets /botutos/, and drums. Their agricultural cultivations: yucca, plantains, maize, cane, ají, auyama /gourd plant/, cotton, tobacco, and various sorts of tubers. The preparation of foodstuffs: boiled and roasted food, cassava and mañoco /maize flour/ ground in a mortar, guarapos /sugar-cane juice/ and purées, fermented and nonfermented. Etc., etc.

179. It should be made clear that these Indians for many generations have, through other neighboring intermediary tribes, been obtaining some instruments of our European civilization: knives, machetes, chícoras, axes, fishhooks, firearms, files, mirrors, glass beads, cloth for loincloths /guayucos/. But they still remember a time when they used to make their loin-cloths and straps for carrying children from the bark of special trees; when they made their fishhooks with thorns from plants or barbs from fish; when they made their arrows with tips of bone, wood, or a special cane; when they used dextrales (stone

2:Armellada--118a M-5 (1933-1945) 1946 SS16 Pemon SS16

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Rudimentary loom on which the Indian woman of the Sabana makes her clothes.

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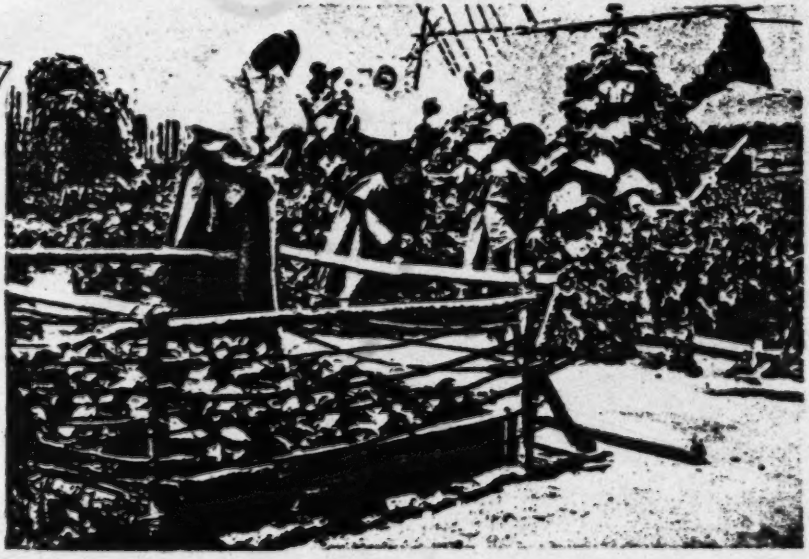

Beautiful plantings of greenery at the Capuchin Mission.

2:Armellada--129a M-5 (1933-1945) 1946 SS16 Pemon SS16

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In the midst of weaving under the supervision of the Missionary Sister.

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Next to the Mission Chapel these married couples of Venezuelan Sabana aborigines pose with the missionaries so that the public may recognize the work for country which is being carried out among them.

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/For further information about changes and continuities in many specific aspects of Kamarakoto culture from aboriginal to modern times, see categories 177 and 178, pp. 273-279./

294 The nearly flat sole is cut from the thick, fibrous, and nearly inflexible leaf
[829] base of a moriche palm. On the upper (foot) side, the anterior end is peeled,
[205] while the heel part is left with the smooth surface of the cortex. Cords of moriche fiber are used, several cords running together from holes on each side at the front of the heel part (at the instep) and these run behind and above the heel when the sandal is worn. A double cord is attached through three holes (in longitudinal series) at the front part of the sandal so as to run between the first (big) and second toes, then separating and tying to the heel cords above
291 their attachments on each side. Essentially similar sandals are worn by almost
171 all the sabana Indians of this whole area, even into northern Brazil. They are
182 another indication, if any is needed, that the Kamarakotos are decidedly sabana Indians, for sandals are rarely or never used by the forest tribes and are, for in-
[484] stance, unknown in the mainly forested Amazon valley, proper. Even the sabana Indians, including the Kamarakotos, seldom wear them, however, doing so only on relatively long marches in the dry season and taking them off around
[172] their homes or on soft or slippery terrane. These sandals are called purai while
[192] the recently introduced Venezuelan sandals are called by their Spanish name, "alpargata."

291 The primitive female costume consists only of an apron just large enough to cover the pubic region and with attached strings by which it is tied around
[288] the waist. This apron, the mosa or motsa, is now always a woven fabric with
[171] beads. Like the dress it is an adaptation of a foreign material to native use, but it is a far older one and merely uses the material in a purely native pattern. These aprons are very attractive and are made in a great variety of patterns —
[531] indeed I have never seen two exactly alike. The favorite colors are white and dark blue and usually the main part of the apron will be solidly one of these, with geometrical borders of the other above and below. There may rarely be an allover pattern or a median band, and colors other than blue or white are sometimes used, but in all that I have seen blue or white predominates.[133] Some of the women always wear the mosa, even though a dress be worn over it. The dress has thus supplemented and not supplanted the older costume and this is an interesting and quite literal example of cultural stratification.

174 It is commonly believed that all the Carib tribes, which would include
291 the Kamarakotos, went without any clothing, even loincloths and aprons, in pre-
[171] Columbian days and that the practice of covering the pubic region arose under European influence. Koch-Grünberg, for instance, states this very positively as regards the loincloth and notes as a decisive argument that even the (Taurepán, not Arekuna in general) name kamisa, is foreign. De Goeje is equally positive as regards the Dutch and French Guiana Caribs and cites Barrere as saying in 1743 that they were completely naked. Roth quotes numerous authorities to this effect regarding British Guiana Indians and apparently inclines to agree with the consensus although he does not give a specific statement of his own

133 [see footnote on p.322, category 116 - Analyst]

301 Women usually, but not always, wear tight bands around arms and legs. At most there are four pairs of these, but three, two or none may be worn. One pair, perhaps the most common, is around the upper arm above the biceps and another, perhaps the least common, around the wrist. On the legs, one is [28] just below the knee and another around the ankle. These bands are woven (or knitted in the same way as a pakara, see "Textiles") of cotton string, alone or with a bead border, or sometimes are all beadwork. They are seamless and are made on the limb so that they cannot be removed without destroying them. 301 Girls often start to wear them shortly after they are able to walk and as they 301 are very tight they produce permanent deformity, particularly on the leg where they cause the calf to be swollen between a slim ankle and slim, or grooved, place immediately above the calf, an effect that is much admired. The upper arm band also tends to produce a definite groove, and these slight deformations are usually visible even on women who do not happen, at the moment, to be wearing armlets or leglets.[134] These bands naturally require replacement from time to time and this is sometimes delayed, or a woman who is past vanity may leave them off for good, but all women apparently wear them at times.

301 Aside from the bands, which might almost be considered part of feminine clothing, by far the commonest ornaments are necklaces, which are worn by practically all girls and women, many small boys, and a few men. A distinction is made between a necklace, properly speaking, usually of beads, prega:nsa, "necklace," or kasu:ru-prega:nsa, "bead-necklace," and a cotton string around the neck, yaichiʔ, to which ornaments are attached. They also wear long paired strands of beads which go around the neck and under the arms, crossing in front between the breasts and in back between the shoulders:

[822] The beads used are usually white and blue, as in the mosa, and white seems to be preferred for necklaces. Simple single strands are seldom used, the most common types being bands six beads wide and a series of loops or festoons of beads (Figs. 33 B, D). There are also special ways of stringing the beads in pairs or in patterns, such as the okõi-yeupa ("snake-bone") pattern and others (Figs. 33, 48, 49). Single strands are also used, but are almost always multiple. Flat, somewhat quadrate, brown seeds, called tsiriruka, are also strung, alternating with white beads, producing a very attractive effect (Fig. 33 C). These seed necklaces are also called kasu:ru-prega:nsa. Necklaces are often further complicated by the addition of streamers to which knitted balls, cotton tassels, puffs of down, bell-like seedcases, etc., are attached.

301 The yaichiʔ is even more varied than the prega:nsa because of the great 177 variety of objects that are tied to it. Almost all the small shiny or colored odds and ends left by previous expeditions have been carefully gathered and tied into yaichiʔ. Small discharged rifle and revolver shells are especially popular and make a really pleasing effect when tied in series. One small boy had a yaichiʔ in which were tied five .22 shells, two capybara hooves, a pocket pencil

134 [see footnote on p.322, category 116 - Analyst]

[Text continues on p.154]

286 "III. Rigid materials that unite a fabric of flexible strands passed through holes in these.

Beads and analogous pierced pieces of all sorts of materials, animal, vegetable, and mineral. (Kamarakotos use glass beads and pierced seeds.) These are not often classed as textile materials, but there are many true textiles that cannot be made without them, in which they are an integral part of the weave which would unravel or collapse without them.

248 283 Of the twisted or spun fibers, cotton, the only one that they spin, properly speaking, is the most important to the Kamarakotos. It is extensively planted, both in the farm patches (conucos) and in small thickets around the houses. The latter may have sprung up originally from discarded seeds, but they are encouraged and used extensively and cotton will grow fairly well on the relatively barren sabanas. It ripens in the latter part of the dry season and when the pods split they are gathered, dried and bleached in the sun in a basketwork tray, and ginned and carded by hand. No comb or other device for carding is employed to supplement the fingers, but the cotton is slowly teased and worked out into a long roll, the thickness depending on the weight of the desired thread.

283 824 Of the fibers that are twisted, rather than spun, only two are important or appear to be truly native and regularly employed, one from a Bromelia and the other from the moriche palm, Mauritia. The leaves of the Bromelia, kurawai' of the Kamarakotos, "curagua" in colloquial Venezuelan (a cognate word), are pulled through a loop to break them and expose the fibers which are then carefully drawn by hand, washed, and dried and bleached in a tray in the sun. The coarser but strong and lustrous Mauritia fibers are made from young leaves, split into segments and then broken by doubling and pulling in the fingers until the fiber bundles can be drawn. These are soaked well in water, cleaned and sometimes further split, and then dried and bleached.

[171] The fibers of the Agave and Fourcroya type, "cocuiza," "cocuy," "maguey," etc., so widely used in northern Venezuela, are not used by the Kamarakotos although one of the "modernists" suggests their introduction. Since they serve no other purpose than do the curagua and moriche fibers and are decidedly inferior to these, it is to be hoped that his plans will not work out.

285 824 Among untwisted textile materials, for baskets, mats, fish traps, etc., three are in general use: palm leaves, a small flexible vine, and the split cortex of a reed. Almost any palm leaves may be used occasionally, but the two regularly employed are moriche (Mauritia) leaves, kwai-yarę, and seje (Oenocarpus) leaves, kunwada-yarę. The palmate moriche leaves require splitting while the pinnate seje leaves do not, but in both cases the strips are not detached from the rib, which becomes part of the finished object.

283 controlled and the fibers are individually longer, so that an almost microscopic strand of a few fibers or a heavy, up to 3 mm., single-twisted strand can be produced. Thus a stout 3-ply bowstring is made from three heavy initial strands, each about 2 mm. in diameter. The basic twisting in this manner is more often to the right, but both are common, and I believe that Kamarakoto hand-
[17] twining must be classified as mixed with right predominating. Prŏdin and Nordenskiŏld have shown that right hand-twining is much more common than left and they classify the Arekunas (probably all Taurepáns in their sample) as right-twining, but with exceptional left-twining and they do show the Guiana coastal Indians as mixed in this respect. In fact, some Indians, including the Kamarakotos, make hand-twine by a technique that can twist it both ways from the middle, and in general the direction of twisting in hand-twisting is not as consistent or as clear a reflection of basic technique as for spinning.

In making some moriche twine, as for sandal fastenings, a curious and rapid technique is employed. The fibers are separated into two bundles and rolled up the thigh, both at once but so that they remain separate, producing two left-twisted strands. The hand then immediately runs down the thigh, twisting these two strands together into a right-twisted two-ply twine.

[829] While on the subject of twine, it should be remembered that strips of bark and vines of all kinds and sizes are often used like twine or rope. Thus tobacco will be tied into a strip of bark for curing, house frames are tied together with vines, etc. Aside from their uses in textiles, however, the spun and twisted twines are commonly used as string to tie loads, baskets, etc.

Textiles Made of Thread.

28 Textiles made of thread (or twine), which is highly flexible in all directions, naturally require different techniques and serve different purposes from those made of more rigid materials, such as those employed in basketry. The two are, however, related and show a tendency toward association in a single culture complex. This is especially true in cases, like that of the Kamarakotos, in which the basketry is plaited, twined, and woven — techniques also employed in thread textiles — rather than coiled — a technique that cannot be applied to thread textiles.

283 Cotton and bast threads have much the same properties, but they differ
● 284 enough that in any one tribe a given type of textile is almost invariably made
171 of one and not the other. Between different tribes there may, however, be re-
[352] placement of one by the other. Thus the Kamarakotos and most other Caribs make cotton hammocks but many Arawaks, who are in general less proficient
[462] in cotton techniques, make bast-thread hammocks.[142] There is also commonly an element of sexual division of labor in these differences. Among the Kamarakotos and various other tribes the spinning of cotton and the manufacture of

142 [see footnote on p.323, category 116 — Analyst]

283 textiles from it is woman's work while the twisting of bast and the manufacture
286 of textiles from it, although occasionally performed by a woman, is generally
[17] man's work.
[142]

In this tribe, however, bast textiles are uncommon. Bast thread or twine is usually used as such and the only textile usually made of it is netting.

286 The Kamarakotos say that they formerly made large pieces of cloth not
[171] unlike the "zaraza" or trade goods now used for loin cloths and dresses. They are still acquainted with a weaving technique capable of producing true cloth, hardly identical with "zaraza" but similar, and such fabrics are known from related tribes. (E.g., Roth, 1924, Plate 10, Fig. C, shows an Akawai baby sling that includes a large quadrangle of native woven cloth.) At present, however, the supply of trade goods is nearly enough equal to the demand and this true weaving technique is used only to produce long narrow bands.

The Kamarakotos now know and use five thread-textile techniques, each closely associated with different finished articles. To these should be added the several bead-techniques, which also use thread but are so distinct that they are here discussed separately. The five thread techniques are as follows:

1. True weaving, producing long narrow bands for headdresses, carrying straps, etc.
2. Loom twining, producing an open-meshed fabric made in the form of hammocks.
3. Loom plaiting, producing wide circular bands used as baby slings.
4. One-needle crocheting, producing a tight fabric usually in small circular bands, for armlets, anklets, purses (pakara), etc.
5. Knotting, producing netting mainly for fish nets.

[114] True weaving is the one textile technique that I did not see and the de-
[121] scription of it was not entirely clear to me. I have, however, good specimens of the textile thus made. The warp is composed of relatively few strands, usually four for a headband but as many as thirty-two for a carrying strap, which are stretched on a simple frame or between fixed sticks (this is the point that was not clear to me in the description of the process). The weft is then woven in by hand, using a flat stick as a separator and batten. (The Kamarakotos do not use either heddles or shuttles in any of their textile work, although both are known among some rather distantly related tribes in British Guiana.) The whole weft is a single continuous strand, which doubles back around the last warp strand on each side.

Although the weaving technique is basically the same for both, two fabrics of quite different appearance are made in this way (Fig. 37). In one, used for headbands, each warp strand is a thick bundle of separate threads (each of which is, in turn, usually two-ply). A six-fold warp strand is common, but the number is not constant. These heavy warp strands remain straight and the weft strands are simply twined around them. The surface of the finished fabric is

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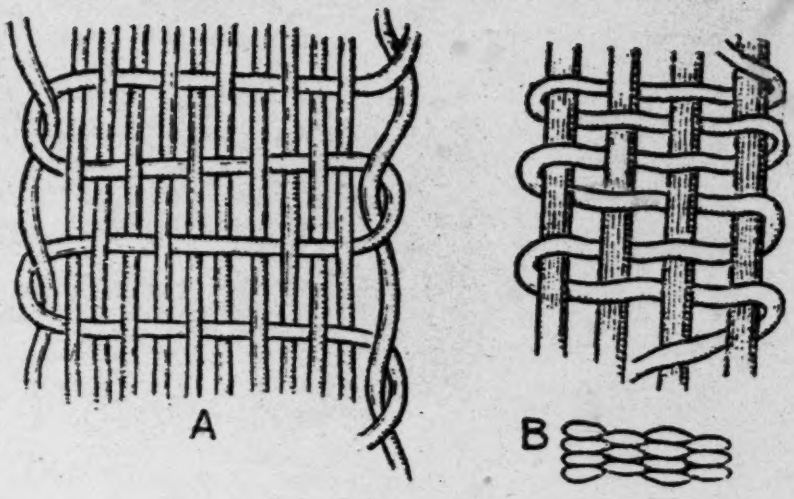

Fig. 37 — Kamarakoto Woven Thread Textiles. A, strap weave with equally flexible warp and weft; when the fabric is closed the surface is formed by the warp. B, band or headdress weave with relatively inflexible warp; in the actual closed fabric the surface is formed by the weft, as shown below. These are diagrams to show the weave. In the actual object the threads are, of course, twisted and the fabric is closed and tight. The headband in Fig. 33E is woven like B of this figure and the carrying strap in Fig. 43A like A of this figure.

formed wholly by the weft and thus consists of a number of longitudinal ridges, almost always four, each composed of transverse strands. In the other variety, producing somewhat wider and decidedly flatter bands generally used as carrying straps, for instance on a pakara, warp and weft are of the same character, almost always simple two-ply threads. Here the weft is essentially straight in the finished fabric and the warp forms the surface, which thus has numerous transverse ridges composed of longitudinal strands.

The process used to make hammocks is fundamentally unlike true weaving, although it uses a crude loom, and the name loom-twining seems most appropriate for it. The loom is the simplest conceivable and is barely worthy of the name, consisting only of two upright posts set in the ground. The continuous warp strand is wrapped around this in an elongate spiral until the necessary width is reached, and the warp is thus horizontal and as originally stretched has one set of strands in front of and another behind the posts. The weft consists of

●286 groups of strands run across the warp at intervals and plaited around the warp strands so as to hold them in place. It is thus a sort of plaited crosstie rather than a weft in the more usual sense of the word.

Each crosstie, bar, or group of weft strands to be plaited consists of four separate threads. To start, these are tied together at one end, leaving short ends projecting as a simple fringe. A front warp strand and one from the back are then taken together and two weft strands pass in front and two behind. The two back weft strands are then brought through to the front passing outside (to left and right of) the front weft strands, and then become the front strands for plaiting in the next pair of warp strands. This does not plait all four weft strands together but makes each crosstie essentially two separate plaitings, of two strands each, tied at the ends. It is, however, common, probably usual, to cross the pair of strands at each point where it goes through from front to back, which has the effect of plaiting all four together, so that, for instance, a weft strand that is at the far right behind the warp at one point will be at the far left in front at the third warp-group thereafter. (Fig. 38.) This is different from and superior to any of the crosties shown by Roth for British Guiana tribes. It is also used by the Taurepánes, for whom Roth shows only a very simple and relatively poor two-strand crosstie, which I did not see either among them or among the Kamarakotos. The crosstie that I have described is, however, probably that shown by Koch-Grünberg for the Taurepánes, although he does not describe it adequately and his figure is not clear beyond showing a four-strand tie.[143]

When a crosstie is completed its four strands are tied also at the lower end with a short fringe left. When all the crosties are done, the free end loops of the warp are plaited in groups and looped onto heavier strands which are all gathered into a single loop at the end into which the hanging-rope, "colgadero," is tied. (See Figs. 39-40.)

[171] 352 Although cruder hammocks are known, these simple hammocks are far inferior to the complicated and often beautiful vertical-warp hammocks made by some tribes, see, e.g., Roth's illustrations of British Guiana specimens, some of which, he says, have been articles of a thriving trade and sold for as much as $400.

286 171 The technique that Roth calls "frame looping" but for which loom-plaiting seems to me a more accurately descriptive term is one of the most peculiar characteristic and interesting achievements of the Indians of this region. It is known not only to the Kamarakotos but also to the Taurepánes (and so doubtless to the Arekumas as a whole), the Maquiritares (at least the Yekuaná tribe), the Akawais (at least the Patamona tribe), the Makuchis, and some neighboring Arawaks (at least the Wapishana and Atorai tribes), among all of whom it is carried on in essentially the same way. It is a regional culture element not distributed tribally or racially.

143 [see footnote on p. 324, category 116 - Analyst]

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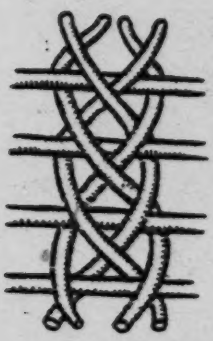

Fig. 38 — Kamarakoto Hammock Crosstie. Diagram showing how the four-strand crosstie holds the longitudinal warp strands of the hammock. In the actual hammock the warp strands, here shown as single for clarity, are always double.

286 171 Nordenskiöld calls this technique Tumupasa, from a group of Tacana-speaking Indians northeast of Lake Titicaca, who use it, and he shows that it has a very curious distribution: in the Guiana region here considered and in the far southwestern part of the Amazon Basin (Nordenskiöld 1924, Map 26). It is barely conceivable that so complex a technique could have arisen independently in these two areas, but no satisfactory explanation has been given for its occurrence in two regions so separate geographically, culturally and racially.

286 In this technique there is no distinction of warp and weft. All the strands are placed on the loom in the same direction and all are treated in the same way, intertwining them with each other, so that the process is pure plaiting and not weaving even though a loom is used: This loom consists of two crossed sticks, like a large X, with a transverse stick tied across each end (Fig. 41). A new loom is improvised when needed and no care is taken in their manufacture except to see that the transverse bars are smooth so that the thread slips on them easily. The thread is tightly wound in a long spiral around these end pieces just as, on a much larger scale, the hammock warp is wound. When in use, one end of the loom is grasped with the toes and the other end rests on the knees or upper legs, leaving the hands free for plaiting (Fig. 42).

To make the simplest pattern, one-over-one, the first thread (on the worker's left side) is passed under the second, then drawn above it and looped over the fingers (first finger or first two or three) of the left hand. Then the

[text continues on p. 169]

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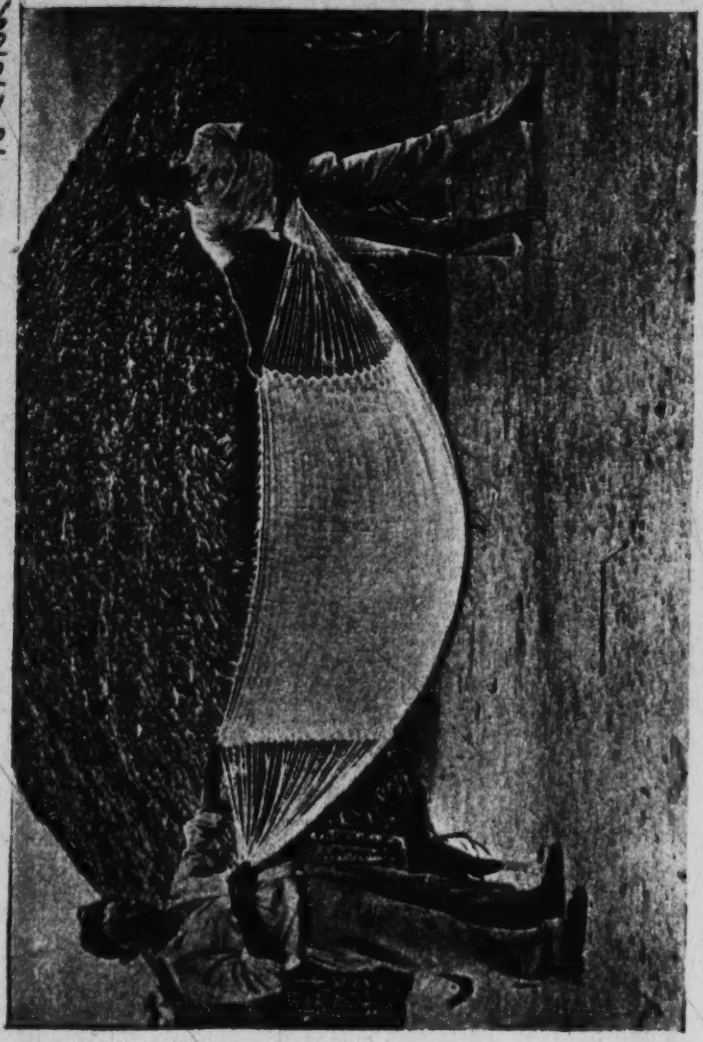

Fig. 39 — Kamarakoto Hammock.
Completed cotton hammock.

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Fig. 40 — Kamarakoto Hammock.
Detail of one end of hammock (in use) showing braiding and attachment of ends of looped warp strands.

5Simpson N-5 (1939) 1940 SS16 Pemon SS16
Kamarakoto
167b

Fig. 41.— Kamarakoto Looms.

A, plaiting loom; the plaiting is done with the fingers at the upper end where a section of finished fabric can be seen (this is much narrower than the slings usually made on such a loom). B, bead apron loom; the upper border and part of the adjacent body of the apron are completed.

5:Simpson N-5 (1939) 1940 SS16 Pemon SS16
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Fig. 42 – Kamarakoto Plaiting Loom.
The loom in Fig. 41A is here shown in use.

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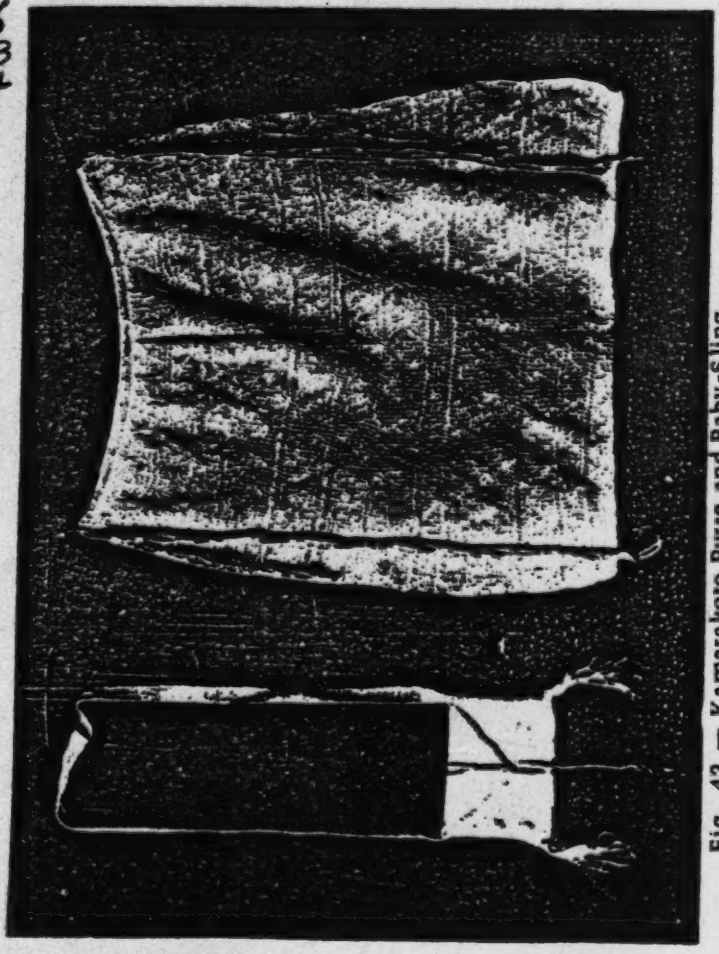

Fig. 43 — Kamarakoto Purse and Baby-Sling.
A, cotton purse or pouch, pakara. B, cotton baby-sling.

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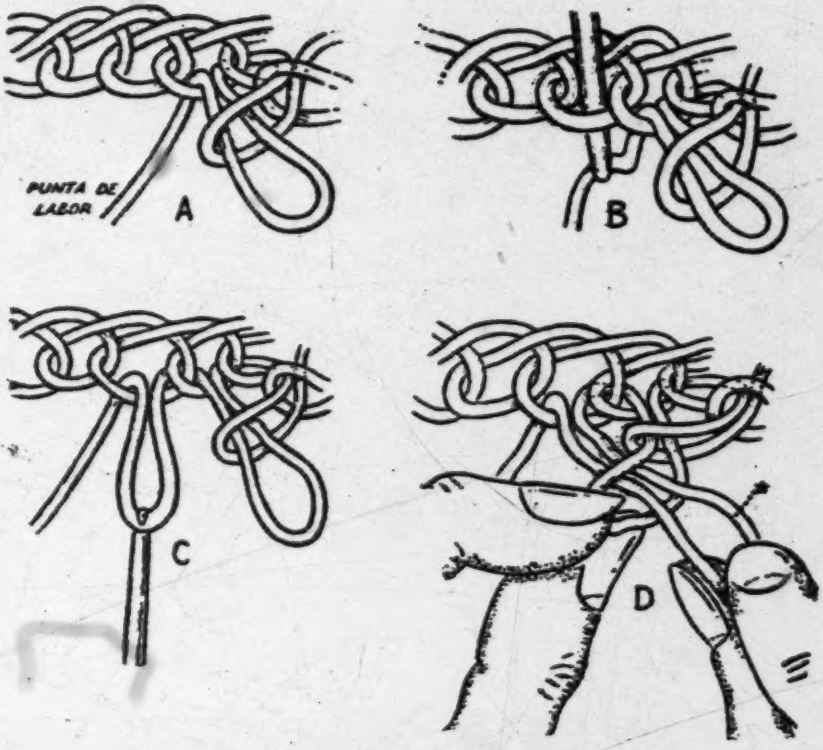

Fig. 44 – Kamarakoto One-needle Crocheting.
In the stage of work shown, the starting chain (top) has been made and the second row is being crocheted. A, work with free loop left from last operation. B, needle is inserted through chain (or last row) and catches working end of thread. C, new loop is pulled through with needle. D, new loop is slipped through former loop with fingers; by pulling on the thread at the point marked with a star, the work is now tightened and the condition seen in A again appears, one stitch farther to the left. The body of the pouch in Fig. 43A is made in this way, as are also some of the leg bands visible on the women in various photographs.

286 third thread is similarly twisted on the fourth, the fifth on the sixth, etc., until the right-hand side is reached. Obviously there must be an even number of strands for this pattern, and in fact the number used is always a multiple of four in order to allow of variations using two strands at once.

When the edge is reached, a smooth, round piece of wood is inserted in place of the fingers, pulled toward the near end of the frame to tighten the fabric, then the left fingers are inserted between the front and back strands on the near side of the stick. The front strands, starting now at the right edge, are successively slid off the finger while between each a back strand is picked up and placed on the fingers of the right hand, in such a way as to twist each back strand across and then above a front strand, just as was done the first time across but now working in the reverse direction. On reaching the other (now the left) side, another stick is inserted and the process is repeated, back and forth from one side to the other.

When the number of sticks becomes so great (commonly ten or twelve) that too much tension is produced, the farthest stick is pushed right around the end of the frame and up its other side until the twist in the strands that it pushes ahead of it reaches, at the near end, that put in and held by the fingers, and then the stick is removed. Then the second, third, etc., sticks are similarly slid around and removed, leaving only two or three in place, and the plaiting proceeds as before. Thus on the back, or under side, of the frame the sticks produce a fabric at the same time that the fingers do on the upper side which is equal in amount to that formed on top, on the near side of the fingers, and is an exact mirror image of the latter. In order to keep the working place conveniently near the body, the whole completed part of the fabric can, from time to time, be slid around to the lower side of the frame.

When the fingers have thus plaited what amounts to the full length of one side of the frame, the sticks have produced an equal amount and the whole thing is completely plaited in a continuous circular band. If, now, the last sticks were removed, the two reversed halves would run into each other and the plaiting would quickly unravel. It is necessary to insert a join or lock between the two. This may be done by replacing the last two, three or four sticks with transverse strings, or, more elegantly, by a crosstie similar to the plaited hammock crosstie described above. In either case the transverse locking strings are tied together at the edge of the band and their long ends are left dangling. Not uncommonly these ends are decorated with tassels, bead streamers, seeds, etc.

The simple one-over-one pattern described is seldom used, as a matter of fact. The commonest patterns are one-over-two and two-over-two. In the one-over-two pattern a single thread is twisted under or over the next two, etc., across the band. The two-over-two is exactly like the one-over-one except that pairs of threads are used each time instead of single threads. By

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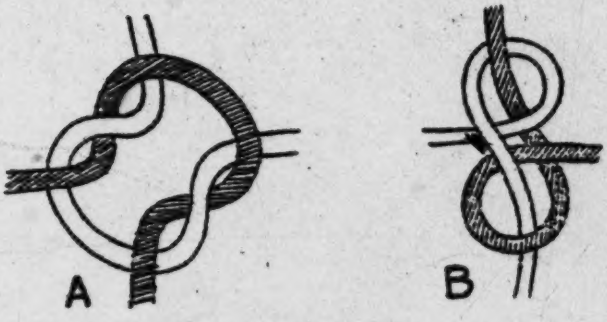

Fig. 45 — Kamarakoto Netting Knots.
A, B, the two usual types of knots used in making nets like those of Fig. 18. One thread is shaded for clarity. They are, of course, identical in character in the actual fabric and the knot is pulled tight.

286 altemating the patterns a varied design can be produced, often with very artistic effect. A favorite pattern is woven mainly in one-over-two, with numerous narrow transverse bands of two-over-two, often winding up at the lock or crosstie with wider sections of tightly woven two-over-two.

[854] [822] [439] The finished baby sling (Fig. 43 B) is sometimes left white (a color it does not retain) and sometimes dyed pink or red. The Taurepánes obtain brightly colored thread by unraveling trade hammocks from Brazil and by tying some of these into their own white thread. they make baby slings with varicolored diagonal bands, but the Kamarakotos do not do this and it is probably another neomorph arising from the adaptation of a foreign material to a native technique.

The fourth thread textile technique may be called one-needle crocheting, because it is composed of interlocking loops of thread made with the aid [171] of a single hooked needle.[144] This art, no less peculiar than loom-plaiting, is also widespread, although apparently less so, and aside from the Arekunas is known among the Makuchis, Akawais, "Caribs" (probably Kalifias), and perhaps a few other tribes. Articles as made by the Kamarakotos are more even and tight in mesh and more skillfully designed and finished than any I have seen, or seen illustrated, made by other Indians and it may be claimed that the Kamarakotos have brought this art to its highest development.

286 413 177 The needle used may be and doubtless formerly always was a wooden pin with a hook carved at the end. Now a large wire nail with the tip bent and filed to make a smooth hook is preferred and most of the women have such

144 [see footnote on p. 324, category 116 – Analyst]

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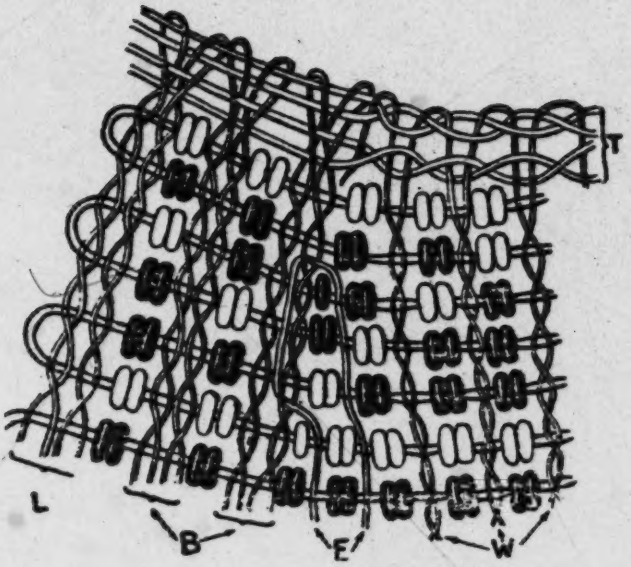

Fig. 46 — Kamarakoto Bead Apron Technique. The diagram represents the upper left corner of an apron in process of manufacture. It shows the formation of the top edge (t) from four heavy strands, the similar formation of a lateral edge (l) and of extra border ties (b) internal to this. The insertion of the first warp strands (w) in the top edging and of extra warp strands (e) in an extra border tie are also shown as well as the manner of working in the beaded weft strands. All the strands are at least two-ply, but for diagrammatic simplicity this is shown only in the case of the first warp strands because in them the two elements separate at the insertion into the top edging. As in other bead diagrams, the fabric is actually tight and is here shown as loose and open only to make the structure clear. The natural size of this much of the fabric would be about 2 1/2 by 2 cm. A typical border pattern is shown with blue (shaded) and white (unshaded) beads. With this border, the body of the apron below it will be solid white. The lower edge will have a border symmetrical with this upper border.

286 413 177 needles — a pound or two of nails supplies the tribe for an indefinite period since nails are used for no other purpose and these needles never wear out and are so treasured as seldom to be lost.

●286 There are several variations, but the basic technique underlying all of them is as follows: To start, an ordinary chain, as in knitting, is made. The needle is inserted through a loop in the chain and a small loop of thread pulled through. A second similar loop is then pulled through the next loop of the chain and then this is pulled through the first loop (using the fingers now, not the needle) and the first loop is tightened on this by pulling on the proper place (Fig. 44). A third loop is then made and passed through the second, and so on. The next row is made by looping through the first, just as the first was looped through the initial chain.

[230] This technique is used in making armlets and leglets, crocheting continuously around the limb so that a tube is produced. This is made on the limb [283] and cannot be removed without destroying it. The most interesting and elegant use of the technique, however, is to make purses or carrying bags, pakara, which are carried by the men although, like all cotton work, made by the women. In this case the initial chain becomes the bottom of the bag and it is left straight so that the first row instead of beginning at the first end of the chain and making an open circle begins at the far end (last one made) and is carried around both sides of the chain, which thus forms a closed, straight end of the knitted cylinder, which in this case is flattened, not really cylindrical.[145] At the other, open, end of the cylinder a flat, triangular flap cover is produced by doubling back on each row, making each shorter than the last. This produces a ribbed pattern not unlike that of the old-fashioned ribbed stockings but with the ribs running across the working edge, not at right angles to it, and the effect is quite different from that of the smooth surface of the cylinder where the crocheting is always in the same direction. In order to support the cylinder while under construction (as the leg or arm does in crocheting bands on them) it is made around a smooth piece of wood of the size and shape of the inside of the purse.

A length of string, usually ending in a tassel, is left at the point of the flap and wrapped around the purse to close it, and a woven carrying band, to slip over the shoulder, is sewed to the sides of the purse.

[227] The last type of common thread textile is netting, usually made by the men from curagua thread. These nets, used only for fishing (which see), are made with very open square meshes. Several simple knots are used, of which the two in widest use are shown in Fig. 45. A peculiarity common to all of them is that a given thread leaves the knot at right angles to its entrance into it, so that it forms two contiguous sides of a square of the mesh and the mesh is built up by a series of zig-zags. The squares are oblique with respect to the rim of the net, which is thus fabricated on the bias and expands and contracts readily in a vertical direction.

145 [see footnote on p. 324, category 116 – Analyst]

[text continues on p. 174]

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Fig. 47 — Kamarakoto Bead Aprons.

Four typical bead aprons, motsa or mosa. The upper apron, for a small girl, is mainly white with red, white, and blue borders and a blue bead belt. The second is mainly blue with blue and white borders and red beads along top of fringe. The other two are plain blue with blue and white borders. In all four the cotton fringe is irregularly smeared pink or red.

Beadwork.

● 286 Beaded textiles form a distinct class because the beads are integral parts of the fabric and not merely applied in a textile that would be self-sustaining without them. The rigid hole of the bead joins threads or permits a change in their direction without the threads themselves necessarily interlocking in any way, as is necessary in all textiles without beads.

The most complicated and important beadwork is the construction of the moss or woman's apron. (See Fig. 46) This is woven on a loom made by bending a flexible stick into a wide inverted U and tying a straight stick across near the ends (Fig. 41 B). A bundle of four stout cotton strings is tied across this frame in its upper part, the ends left long and tied to the frame temporarily — they later become or are attached to the belt by which the apron is suspended. Warp strands, each a lightly twisted two-ply cotton thread, are tied into this in a manner analogous to the simpler four-strand hammock crosstie and exactly like the tie for festooned bead necklaces. (Fig. 48). A bundle of four warp strands on each side is tied at the end of the crossbar, outside the curved frame, to form the edges of the apron, and a second bundle of four, and sometimes a third or an additional bundle of two, is tied in the same place on each side medial to these border strands. As the weft is applied, it is worked into the edge strands so that they form a tie on the weft like the top crosstie on the warp and make a finished edge. Two beads on each weft strand are left between this and the next bundle of four warp strands and if there is a third bundle two beads are similarly left between it and the second bundle and these bundles are tied in like the edge bundle or, if there are only two strands in the third bundle, with a simple spiral twist like the simplest two-strand hammock tie (as described by Roth, for instance — the Kamarakotos themselves do not use a two-strand tie in hammocks).

The beads are strung on two strands of very fine two-ply cotton thread, the two strands being kept separate although strung together through each bead. A meter or so may be strung at one time. These strung beads form the weft. In the cases I have seen, the work is speeded up by working in two distinct weft strands at once, then doubling back with both. In descriptions of similar work among related tribes only one weft strand is mentioned.

The way of working the weft strands in the border bundles of warp strands has already been mentioned. In the main body of the apron the process is different. Here the warp strands not in use are lightly tied in several (five, six, or more) bundles on the crossbar to keep them from snarling. To work in the weft, the appropriate warp bundle is untied and the first warp strand of the bundle run between the two threads on which the beads are strung, then the next warp strand is run through, and so on, in each case leaving two beads between adjacent warp strands.

[Text continues on p. 176]

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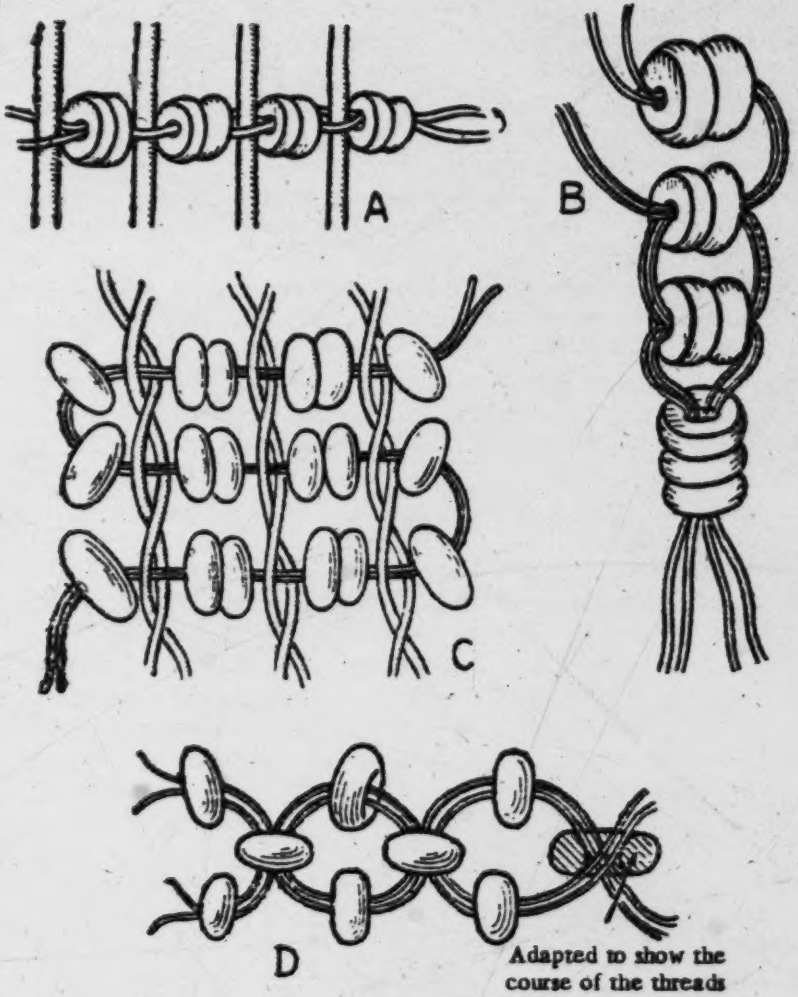

Fig. 49 — Kamarakoto Bead Technique.
A. the basic fabric (apron) technique. see Fig. 46. B. C. D. various necklace techniques. The necklace in Fig. 33 D is woven by the technique shown here in C.

286 As the apron becomes wider below, additional warp strands are added by tying into the most medial of the border bundles -- the borders are never widened and additional warp strands are almost invariably added from the border, only very rarely within the area below the top tie.

When the beaded area is completed, the ends of the warp strands and some other threads added for the purpose are knotted around a transverse string and left projecting as a fringe, which is often dyed pink or reddish brown. Typical completed aprons are shown in Fig. 47.

Bead bands, festoons, and a few special types of stringing beads, although not strictly textiles, have the same character and involve the same sorts of problems. Self-explanatory illustrations of several types of this work are given, Figs. 48-49. Beads are always strung simultaneously on two separate threads even when this is not a technical necessity as it is in the apron fabric. Cotton is generally used, but occasionally very fine curagua thread is employed. All bead work is done by women.

[283] [462]

Basketry.

*285 The Kamarakotos make and use baskets in great numbers and variety and their skill in this respect is perhaps their most interesting characteristic to the visitor. Baskets are necessary to almost every phase of Kamarakoto life. Among the things for which they are used are:

[482] Carrying — a wide variety of baskets adapted for carrying almost everything, light or heavy, that an Indian has to transport.

[251] Storage — open baskets of several sorts for storing food, etc., also chests, jewel boxes, and others.

Mats, as floor mats for closing doors.

Pans.

Plates and trays for serving food.

Casave presses.

Casave sifters.

Trays for drying cotton, etc.

Bird cages.

Fish traps.

Quivers for blowgun darts.

It must, however, also be noted as characteristic that the Kamarakotos and their allies do not use basketry for purposes common among some distant Indians, for instance in North America. They do not make water containers of basketry and so have no boiling baskets, water storage baskets, or basket canteens, cups, and bottles. They do not use basketry as an adjunct to pottery manufacture, nor do they make any clothing, sandals, cradles or baby-carriers of basketry. Finally, they do not make any sort of basketry furniture,

*285 128 171 they approach identity in a few cases, one is best considered as a development of plaiting with separate strands begun at an angle and the other as weaving with a relatively more flexible and less inactive warp than in true wicker.

*285 128 In order to accommodate this greatest class of South American basket textiles in the classification I have introduced another category under the rather clumsy but not entirely inept term "woven plaiting," leaving as "weaving," strictly speaking, wicker, twined, and wrapped work in which there is an absolute distinction between warp and weft, and the former is practically inflexible, or at least no special use is made of its flexibility within the weave (but only to shape the whole form of the object woven).

Since it includes almost all the basketry of the Indians under discussion, the subdivision of woven plaiting is of course carried to a much finer degree than that of the divisions that are less pertinent here.

*285 Among these Indians the distinction between woven plaiting and wicker weaving is difficult to maintain and is admittedly largely artificial, although it seems necessary to keep it in a classification of more than local use because as between different culture areas there is an absolute distinction here. It seems probable that what little wicker weaving the Kamarakotos do has simply arisen from their checked woven plaiting in part from the rare use of a relatively inflexible fiber and in part from certain unusual forms in which it is most convenient to hold one set of elements rigidly (whether or not they are inherently flexible) while the other set is woven across them. However, it arose, real wicker weaving is used by the Kamarakotos for flask-like baskets to hold kapok (for blowgun darts) and, more dubiously, on the shallow rims of square trays (matu:tu), but for practically no other purpose.

[171] [286] Lattice wicker and lattice twining are perhaps unknown and certainly rare in this whole culture area. I did not see or hear of any twined basketry among the Kamarakotos, although they use this technique freely in thread-textiles, another small bit of evidence that their basketry is to be considered as an offshoot of plaiting rather than of weaving.[150] Such work, of the simplest sort, is known in this culture area but it is rare and is most likely to be used for things like pot stands that are not baskets and can barely be considered as textile work even in the broadest sense.

[171] Wrapping is even rarer than twining. Plain and twilled wrapped weaving was not seen among the Kamarakotos and is rare or absent over the whole culture area, but a limited use is made of lattice wrapping — the Kamarakotos make fish traps in this way. Although it cannot technically be excluded from basketry, I suspect that this technique really has nothing to do with any of the other Kamarakoto basketry and is to be related rather to the techniques involved in house building, especially roofing, that is, simply to the procedure of tying rigid poles together.

150 [see footnote on p. 325, category 116 – Analyst]

301 135. Although the Kamarakotos may have made shell beads, as some Caribs are known to have done. Probably, however, the Kamarakotos had no [177] suitable materials for these. In any case, seeds were also used and native beads, if they were known, have been completely replaced by the far better and sufficiently abundant foreign beads.

[184] 136. The only exception was a woman who had European earrings but she was married to one of the two men who have lived in Venezuelan towns and her wearing them was obviously not native.

304 137. I am sure that this statement is true in general, but in individual 184 cases it was occasionally impossible to be sure whether a design was painted or 302 tattooed.

000 138. We were interested to observe that some lower-class women in civilized Venezuela, with much Indian blood and definite Indian inheritance in their culture, apply rouge on the face exactly as the wild Indians apply red paint — in large splotches meant to look painted and artificial, and would not think of shading it so as to imitate a naturally bright complexion.

28 139. I do not mean that the textile work of Venezuelan Indians is unknown 114 or has not been mentioned in various excellent studies, but that almost no careful description of its details, nomenclature, etc., have been published. Even Koch-Grünberg's voluminous studies only describe the various textile manufactures in a summary way, with practically no details as to types of weave, etc.

285 140. Speaking of traps woven from this material by the Adole Indians 824 on the Orinoco, Roth says that they are made "from a kind of osier twig, which is ..... called bejuco," but "bejuco," of course, means only "vine" (of any sort, and, incidentally, does not include osiers).

000 141. The Carib word manare has also been taken over into colloquial Venezuelan, with the usual shift in accent, but is applied to the casave sieve, which is made of manare but is not "a" manare in Carib. This is a common etymological phenomenon; compare, in a reverse direction, the adoption of the Spanish word "camisa" not for a shirt but for cotton cloth by some Caribs (not the Kamarakotos).

171 142. In view of this differentiation it is interesting that in civilized 283 Venezuela the handmade hammock, "chinchorro," of the common people is 286 made of bast-thread while the sometimes more aristocratic "hamaca," usually 352 factory-made, is of cotton.

114 143. The daughters of Dr. Peña at Santa Elena showed me a rather poor
● 286 three-strand tie, which is unlike anything I have seen described from this region,
177 but which may not really be Taurepán since these girls are cultured, in a European sense, despite their extensive knowledge of the Taurepanes among whom they live and to whom their likewise cultured mother belongs.

114 144. But my wife informs me that it is basically unlike any "civilized"
286 technique, whether crocheting or knitting, and that the term is hardly applicable to it.

145. Roth says that bags are formed by sewing together the edges of the cylinder, but this is not true of the Kamarakotos, at least, and their procedure makes a seamless pocket that is much neater than would be produced by sewing.

*285 146. The usual stated distinction between checked (or checker) and twilled patterns is that the former is always one-over-one and the latter is one (or more)-over-two (or more). It seems to me that when two strands or more are woven into the checked pattern together, as if they were a simple two (or more)-ply strand, the result is not taxonomically distinct from the checked pattern. The essential difference is whether the pattern quadrangles, no matter how many strands form them, are simply alternating as in the checked pattern or whether they succeed each other in steps or some still more complicated way. I call only the latter sort of work twilled. Twilling cannot be one-over-one, but it can theoretically have any other over-and-under formula; checking is usually one-over-one but can theoretically have any over-and-under formula.

147. This rare and aberrant form, not seen among the Kamarakotos, should probably be considered only as a variant of the hexagonal lattice, in which one set of weft strands is lacking. Roth calls it pentagonal, which it is literally.

148. A variety of wrapping in which the weft strands interlock with each other as well as wrapping the warp elements, a style so distinctive that Roth is followed in distinguishing it from ordinary wrapping. Wrapping is transitional to coiling and the locked weave could even be classed as a sort of coil although its associations, and probably also its origin, are very different from those of true coiling. It is particularly close to "lace coil" (see next footnote), as Roth mentions (in different words).

[114] 149. Kissell (1916), who has given one of the best discussions of coiled basketry, includes a third type of coiling, lace coil. The lace coil, however, is really a thread-textile and not a basketry technique. It is used to make

*285 thread netting. The knotting in Kamarakoto nets can be considered as a variety of lace coil work, and Roth reports from the Uaupes River a completely typical example of lace coil in a fish net. In the examples studied by Kissell the lace coil serves some of the functions of basketry and is strongly associated with true basketry coiling, but in South America the same technique is used in a way unlike basketry and among Indians to whom coiled basketry is entirely unknown — strong arguments against classing it even secondarily as a basketry technique, at least in this context. It is true, as Roth points out, that his locked basketry weave is closely allied to the thread textile made by lace coiling (he does not use this name). It is barely possible that this uncommon type of basketry may have been derived from a thread textile technique, unlike almost all other basketry which arose from plain plaiting, but even were this proven it would hardly justify anyone in considering the lace coil thread-textile to be woven by a basketry technique, or as being in any way related to true coiled basketry.

●[286] 150. Note also the use of an advanced plaiting technique for thread-textiles.

151. Roth calls this the weft, but it is obviously the passive element and I follow good precedent in calling the passive element the warp, regardless of its direction.

101 171 152. Thus Wissler's summary of the southeastern culture area (1938) suggests probable West Indian and South American influence in methods of starchy root preparation, use of fish poisons, some details of house construction, use of blowguns, etc.

*285 114 227 153. Roth places here fish traps like those of the Kamarakotos, but they do not seem to me to be baskets in a strict sense.

*285 252 154. The Warrau and some other distant tribes use them (with a different edging) for sifting moriche ("ite") flour, but Kamarakotos do not make this flour and do not use <u>crapa</u> for sifting.

*285 171 155. Roth describes a similar edging technique which he says is used by the Arawak and Warrau on sieves for trade, not for their own use. The Kamarakotos make it for their own use, and in fact I did not observe that they were acquainted with any simpler technique for this purpose.

156. It is not true that these, or as far as I know any South American Indians, weave baskets so tight that they are waterproof without a leaf lining or an outer coating of gum or wax. Such a result can hardly be achieved except